

Site Visit Report

Under the European Union (Drinking Water) Regulations 2014 as amended, the Environmental Protection Agency is the supervisory authority in relation to Irish Water and its role in the provision of public water supplies. This Audit was carried out to assess the performance of Irish Water in providing clean and wholesome water to the visited public supply.

The audit process is a sample on a given date of the facility's operation. Where a finding against a particular issue has been reported this should not be construed to mean that this issue is fully addressed.

Water Supply Zone	
Name of Installation	Knockananna Public Supply
Organisation	Irish Water
Scheme Code	3400PUB1035
County	Wicklow
Site Visit Reference No.	SV26111

Report Detail	
Issue Date	02/12/2022
Prepared By	Lisa Noone

Site Visit Detail			
Date Of Inspection	03/11/2022	Announced	Yes
Time In	10:30	Time Out	12:10
EPA Inspector(s)	Lisa Noone Michelle Roche		
Additional Visitors			
Company Personnel	Irish Water: Ed Haythornthwaite, Daniel Behan EPS: Padraic Dunne		

> Summary of Key Findings

1. The audit determined that Knockananna Water Treatment Plant was performing well and producing safe drinking water on the basis of primary disinfection being achieved by chlorination. An adequate level of residual chlorine was being maintained in the distribution network however monitoring is not carried out in representative locations at the extremities of the network.
2. There is no treatment barrier in place at the Water Treatment Plant to prevent *Cryptosporidium* entering the public water supply and the protozoal log treatment requirement has yet to be determined, therefore requiring review by Irish Water so that appropriate measures can be implemented to reduce risk.

> Introduction

Knockananna Public Water Supply (PWS) serves a population of 193 in the village of Knockananna, Co. Wicklow with approximately 34 m³ of treated water being produced at the plant per day.

The raw water abstraction is from two boreholes located in the centre of the village and to the north of the village. The treatment at the plant comprises of pH adjustment and chlorination (sodium hypochlorite), with treated water stored on site in a reservoir and distributed to consumers.

The audit of Knockananna WTP was carried out to assess the performance of Irish Water in providing clean and wholesome drinking water.

> Supply Zones Areas Inspected

Both boreholes were inspected as part of the audit, in addition to treatment processes on-site.



1. Source Protection

	Answer	
1.1	Is the abstraction source(s) adequately protected against contamination?	No
Comment		
It could not be confirmed by Irish Water if the landowners had been formally written to about the presence of a drinking water supply in proximity to their lands and their obligations under the <i>European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2022, as amended.</i>		



2. Disinfection

		Answer
2.1	Is there a chlorine residual ≥ 0.1 mg/l throughout the network?	Yes
Comment		
Network chlorine monitoring results and map were submitted by Irish Water in advance of the audit. The information provided indicates that while chlorine residual results in the network are satisfactory, monitoring is not carried out in representative locations at the extremities of the network.		



3. Reservoirs and Distribution Networks

		Answer
3.1	Is treated water in tanks and reservoirs suitably protected against contamination?	No
Comment		
Reservoir vents observed during the audit were not protected by a suitably sized mesh to prevent ingress of animals		



		Answer
4.1	Has the protozoal compliance log treatment requirement been identified for the water treatment plant?	No
Comment		
<p>The protozoal compliance log treatment requirement has not been identified for the Water Treatment Plant. Irish Water confirmed that the characterisation of water sources in terms of protozoal log treatment requirement is carried out using a risk-based approach and has yet to extend to many groundwater supplies. There is no protozoal barrier at the plant and raw water monitoring for <i>Cryptosporidium</i> is not carried out.</p>		

Recommendations

Subject	Knockananna Audit Recommendations (03/11/2022)	Due Date	02/01/2023
Action Text	<p>Recommendations</p> <ol style="list-style-type: none">1. Irish Water should liaise with Wicklow County Council to ensure that local landowners have been written to in relation to their obligations under the <i>European Union (Good Agricultural Practice for Protection of Waters Regulations) Regulations 2022, as amended</i>.2. Irish Water should investigate the feasibility of carrying out monitoring at all extremities of the network.3. Irish Water should ensure that all vents on the reservoir are appropriate and secured against ingress of animals or deliberate introduction of any contaminant or acts of vandalism.4. Irish Water should determine the protozoal log treatment requirement for the plant and in the interim prepare a programme of monitoring in accordance with the <i>Irish Water Rationale for Determining the Frequency of Cryptosporidium Monitoring in Public Water Supplies</i>. <p>Follow-Up Actions required by Irish Water</p> <p>During the audit, Irish Water representatives were advised of the audit findings and that action must be taken as a priority by Irish Water to address the issues raised.</p> <p>This report has been reviewed and approved by Ruth Barrington, Drinking Water Team Leader.</p> <p>Irish Water should submit a report to the Agency on or before 02/01/2023 detailing how it has dealt with the issues of concern identified during this audit.</p> <p>The report should include details on the action taken and planned to address the various recommendations, including time frame for commencement and completion of any planned work.</p> <p>The EPA also advises that the findings and recommendations from this audit report should, where relevant, be addressed at all other treatment plants operated and managed by Irish Water.</p>		